

# MEMORANDUM

TO: DISTRIBUTION

FROM: CHARLES LISTER

DATE: 21 JUNE 1990

RE: TOXICOLOGY FORUM SESSION ON ETS

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I attended the session on ETS -- "science and meta-science" -- at the European meeting of the Toxicology Forum on June 19. Dr. Gaisch also attended, as well as some of our consultants, plus Dr. Adlkofer and some of the German scientists with whom he works. The session was basically quite positive, but there were some unhappy comments about the primary issue and some support for a "threshold dose" approach to ETS issues. No written papers were circulated, but a transcript will be prepared and available for public use.

The session was chaired by Professor Karoly Lapis of Budapest, who was essentially non-committal about the issues. The first paper was presented by Dr. Frits Rosendaal of Leiden University Hospital, on suspected risk factors for lung cancer and cardio-respiratory disease. He is a young man who spoke with some charm and humour. He produced long lists of suspected risk factors, which included active smoking and ETS, but successfully showed that numerous other factors have also been suggested. He explained the deficiencies of the various studies, and stated that he could not on the basis of current information condemn or single out any particular factor. He noted that only some five percent of active smokers contract lung cancer. He referred to four kinds of bias -- in data, in research methods, in authors, and in journals -- and illustrated each of them. He illustrated publication bias by showing the complete absence in the literature of negative (i.e. those showing no risk) small-scale ETS studies. The overall tone of his presentation is exemplified by a quotation from Robert Heinlein with which he ended, asking: does history record any case in which the majority was actually right?

The second paper was presented by Dr. Christian Vutuc of the University of Vienna on low dose epidemiology. He was not a particularly good communicator, but his paper did a good job of explaining the inadequacies of epidemiology in dealing with low risks -- bias, confounding, measurement problems, changing tobacco

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products, the universality of some ETS exposure, etc. He pointedly observed that regulators should not intervene regarding low or uncertain risks because of political pressure or extremist demands. He noted that industrial pollution exposures in the 1950s and 1960s were probably much worse than we now assume, and used the analogy of current industrial conditions in East Germany and Czechoslovakia. He also said we cannot now tell if low dose active smoking presents any risk, and raised the possibility of a threshold. The only low dose situation where, in his view, intervention is justified is with respect to actively smoking pregnant women. He acknowledged in response to questions that in his view a husband's smoking cannot affect the foetus.

The third paper was by Martin Jarvis of the Addiction Research Unit at London's Institute of Psychiatry, and concerned markers for ETS. The paper was not very elaborate or sophisticated, but generally argued that cotinine, although not perfect, was the best available marker of exposure, and adequate for many purposes. He referred to Idle's paper, although not by name, which described the problems with cotinine, including non-tobacco sources such as tomatoes and potato skins. He said he thought Idle had exaggerated the possibility of such sources by as much as 100 times by using dry weights. In response to questioning by Dr. Nancy Haley, Dr. Bob Brown and others, he conceded that cotinine is only a "rough and ready" marker.

The fourth paper was by Dr. Helgo Magnussen from Grosshansdorf, FRG, regarding ETS and airway responsiveness in asthmatic children and adults. He presented very useful data showing no change in various airway markers among asthmatic children exposed for one hour to ETS at a level of 20 ppm of carbon monoxide. When asked if this was an "extreme" concentration, higher than generally found in ordinary life, he said yes, and explained he was trying to evaluate earlier studies in which equally extreme levels were used. In a comment from the floor, Dr. Kentner congratulated him on conducting the first such study using "modern" methods, and said it confirmed his own data from 1970s.

The fifth paper was given by Dr. Joachim Thiery of the University of Munich regarding correlations between ETS and cardiovascular symptoms. He emphasised the absence of experimental evidence of any link between ETS and CHD, and said the epidemiological studies were flawed by bias and confounders. His conclusion was that epidemiology was not sensitive enough to show any possible link with CHD. In a question, Peter Lee added that this is an area troubled by publication bias.

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The sixth paper was presented by Dr. Dietrich Schmahl of the German Cancer Research Center, regarding lung cancer. His paper was the most troubling because it assumed that active smoking "causes" lung cancer, and argued that ETS cannot be a risk because of the low dose involved. His paper assumed a universal and consistent world-wide lung cancer pattern, which is not the case, and omitted the stronger points on the lung cancer issue that have repeatedly been made by Lee, Leslie and others. His conclusion was that ETS had not been shown to be associated with lung cancer, but his method of analysis was unsophisticated and heavily dependent upon the existence of a threshold level of exposure.

The programme concluded with a panel discussion, chaired by Dr. Gio Gori. He usefully emphasised that ETS is a political issue, and noted that all scientists should be concerned about science's reduction to rhetoric and politics. The only unhappy point was a comment by Dr. Shubik of the Forum staff that if it is assumed that active smoking is a risk and should be reduced, its elimination would leave no ETS issue to worry about.

Overall, the session produced some quite useful papers and conclusions, although unfortunately accompanied by Dr. Schmahl's assumptions about the primary issue and the suggestion that ETS issues should properly be analysed on the basis of a dose threshold. Nonetheless, the session's transcript will provide some helpful new data and analyses.

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